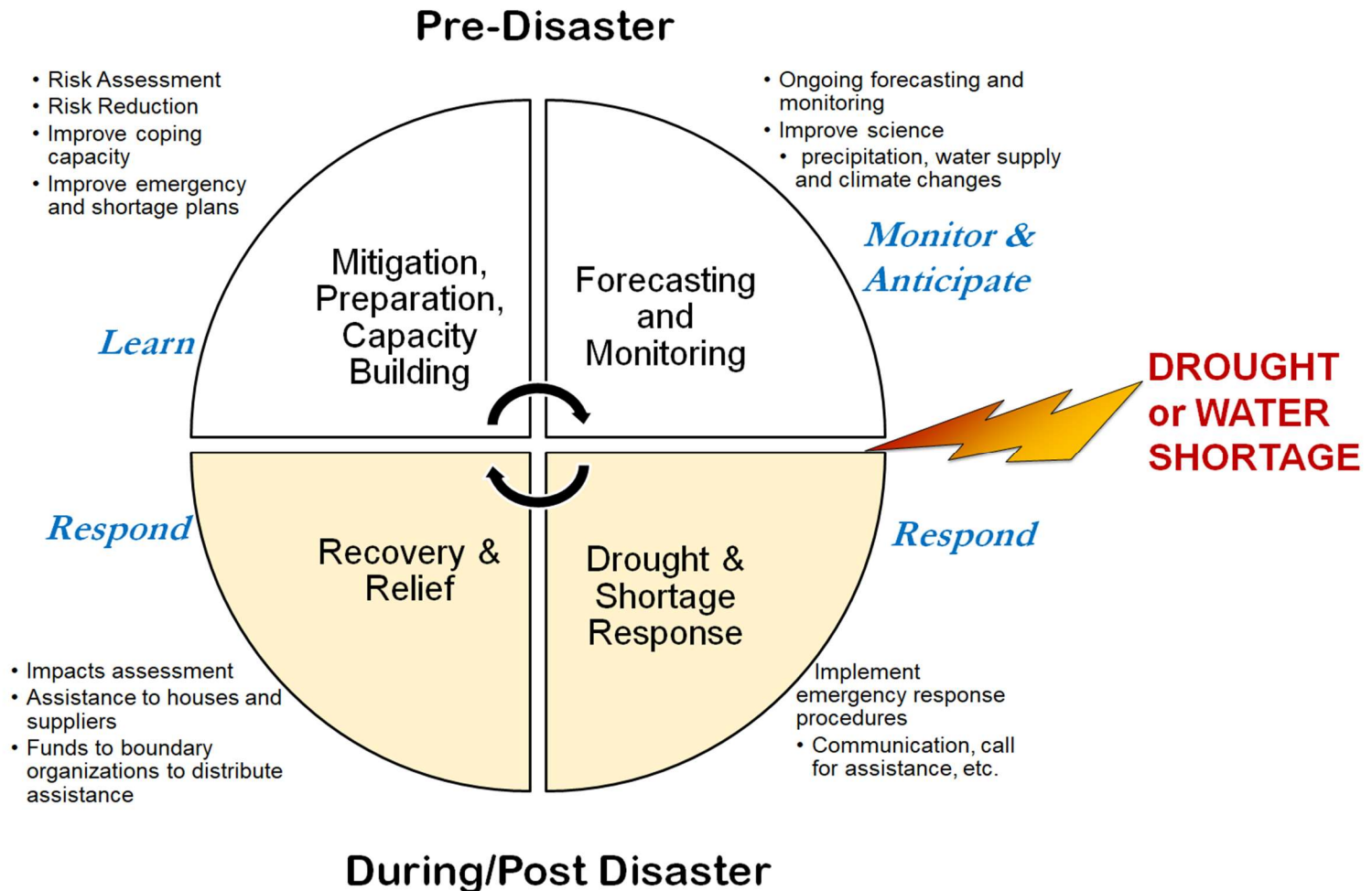


Drought and Water Shortage in California: Disaster Risk Management for Small Suppliers and Rural Communities

Drought planning and management involves several key activities, including but not limited to emergency response procedures and water shortage contingency planning. Forecasting water shortages and associated risks, acknowledging vulnerabilities, reduction mitigating for shortages are all critical to reduce the reliance on crisis management. Below we present four commonly used groups of activities used for drought planning. These include both crisis management (during and post-event) and risk management (i.e. including early forecasting and preparing to reduce risks).



Phase	Component	Roles & Responsibilities (who does what). <i>Fill in below</i>
<p><i>During Disaster</i></p> <p>Phase 1: Drought Response</p>	Emergency Response Protocol activated	<p>Federal</p> <p>State:</p> <ul style="list-style-type: none"> • CalOES • DWR • SWRCB <p>Local/Regional</p> <ul style="list-style-type: none"> • County OES • County Environmental Health • County Special Districts • Groundwater Sustainability Agency • Regional Water Management Groups • Other • Other •
	Who responds when shortage level reached	
	Further actions in response to shortage levels	
	Who oversees communication protocols and public awareness program	
	Who is lead coordinator between agencies and organizations involved in response	
	Implement outreach and awareness program	

[illegible]

Phase	Component	Roles & Responsibilities (who does what). Fill in below.
<p><i>Before Disaster</i></p> <p>Phase 3: Preparation, Mitigation and Capacity Building</p>	Vulnerability and Risk assessment	<p>DWR creating first iteration based on statewide available data, to be augmented by regional organization if possible with locally available data (GSA, County, or others)</p> <ul style="list-style-type: none"> List priority at risk suppliers and communities (DWR lead as first iteration in 2020, TBD as lead in future)
	Mitigation	<p>County</p> <ul style="list-style-type: none"> Include drought as hazard in local hazard mitigation plans
	Risk reduction	<p>Supplier</p> <ul style="list-style-type: none"> Replace redwood storage tanks with steel tanks
	Define shortage levels and triggers	
	Define shortage response actions	
	Designate drought and water shortage coordinator for activities and establish hotline to assist affected communities	
	Describe procedures and protocols to communicate and inform communities and responsible agencies	
	Plan how to coordinate between local suppliers, agencies, regional entities and the state	

<p><i>Before Disaster</i></p> <p>Phase 3 (cont.): Preparation, Mitigation and Capacity Building</p>	Develop emergency response plan for water shortage	
	Identify financial consequences of water shortage conditions	
	Secure funding to respond to water shortage contingency	
	Plan for how to coordinate and channel emergency funds for recovery programs	
	Assess communities' water supply sources and reliability	
	Description of potential opportunities to improve resilience to drought and water shortage	<i>Examples: well rehabilitation, supply diversification, adjacent water systems, agreements with large suppliers</i>
	Actions to improve efficiency and who will implement	<i>Examples: voluntary conservation, leak repairs, use of recycled water</i>

[illegible]